

Date: 9/16/98

Time: 5:17 PM

Pages: 28

Sender: 312 922 7747

Fax Number:

Subject:

Company: SEP. 16. 1998, 4:23PM DVORAK & ORUM

Type: 312 922 7747 Fax NO. 5185 P. 17/28 03/09

FROM: PIZZEBE/BRISBANE
SEP. 14. 1998 3:55PM

TO: DVORAK & ORUM

61 7 5494 9541

1998.09-16

12:25

#932 P. 04/09

NO. 5123

P. 21/29

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

ECCLES, Anthony Phillip

Examiner: Margery S. Phipps

Serial No.: 08/637,802

Art Unit: 1742

Filed: May 8, 1996

For: SILVER ALLOY COMPOSITIONS

Attorney Docket No.: C-35469

DECLARATION UNDER RULE 132Hon. Commissioner of
Patents and Trademarks
Washington, D.C. 20231

September 14, 1998

In 1963, I, Anthony Phillip Eccles, established Apex Investment Castings Pty. Ltd., which specializes in custom casting of precious metals for the jewelry industry. Since 1963 I have been actively involved in the research and development of precious metal alloys for cast and wrought products in all carat rated gold and silver alloys including several special purpose alloys, and silver alloy compositions suitable for jewelry, flatware, and coinage. I was admitted to the Gold and Silver Smiths Guild of Australia in 1988, was invited to present a paper on jewelry technology at the Santa Fe Symposium in 1996, was recognized with an award for Industry Leadership by the Symposium in 1997, and published a paper on precious metal alloys entitled "Gold Technology" by The World Gold

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RX TIME 16.09.98 14:57

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Fax NO. 5185, P. 18/28 04/09

FROM: PIZZEYS/BRISBANE
SEP. 14. 1998 5:58PMTO: DVORAK & ORUM
61 7 5494 96411998.09-16 12:29 #332 P.05/09
NO. 5123 P. 22/29

PHILIP
ECCLES, Anthony Phillips
 Serial No. 08/637,802
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 Page 2

Council. I am currently the Managing Director of Apex Investment Castings Pty. Ltd. and responsible for all aspects of the company's continuing precious metal research program.

Apex Investment Casting Pty. Ltd. was the first to successfully cast and market in 1966, precious metal alloys that contained silicon. In 1970 Apex Investment Casting Pty. Ltd. gave its formula for gold alloys containing silicon to the Worshipful Company of Goldsmiths in London for industry analysis and assessment, and in 1993 Apex Investment Casting Pty. Ltd. developed a range of cadmium free precious metal solders.

LONG FELT BUT UNRESOLVED NEED

Sterling silver, near sterling silver, and other high silver concentration alloys have been commercially manufactured for the jewelry, houseware, and minting industries for centuries and have been available on a wide scale at least since the beginning of this century. Many new compositions of these high silver content alloys have been manufactured over the years in order to fulfill particular needs.

Fire scale resistant silver alloys first appeared in the industry in 1970. Elements such as nickel, cadmium, zinc, and silicon, have been used over the years, and some are still used today as additives to high silver content silver alloys in order to improve the fire scale resistance of the alloys which will undergo heat treatment during post melt processes, as are required during jewelry making etc. Essentially, U.S. Patent No. 5,039,479 Bernhard et. al., filed September 1990, teaches a high silver content silver alloy

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FROM: PIZZEYS/BRISBANE
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TO: DVORAK & ORUM
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1998-09-16 12:30 #332 P. 08/08
NO. 5123 P. 23/29

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Page 3

composition exhibiting increased firescale resistance as is desirable for fine silver applications.

The Bernhard 479' patent is owned by United Precious Metal Refining Company Inc. (United Precious Metal) of Alden, New York, which is a major manufacturer of jewelry grade and other high silver concentration alloys for the jewelry, housewares, flatware and mining industries. United Precious Metal's 479' patent advanced the company's manufacturing of its sterling silver alloy compositions, however, this alloy was seriously limited in its suitability for jewelry manufacturing because of its relatively soft consistency which is not hard enough for practical jewelry making.

United Precious Metal, as early as September 1990, fully appreciated that it had an interest and desire in developing a high silver content silver copper alloy exhibiting superior fire scale resistance, as well as a hardness akin to standard jewelry silver alloys. Though possessing the means and motivation to increase the work hardenability of its fire scale resistant silver alloy, United Precious Metal failed on their own to find a solution for several years after the filing of their 479' patent.

At a Santa Fee Symposium held in early 1993, I attended a meeting with Mel Bernhard of United Precious Metal who was familiar with my work in incorporating silicon additives to precious metals. At this meeting, I was given the task of reviewing the problems associated with increasing the work hardenability of United Precious Metals' patented sterling silver alloy, and coming up with a solution to improve the hardness of this silver alloy. I discovered that by adding trace amounts of germanium to the high silver,

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Type: 312 922 7747 1998-09-16 12:30 NO. 5185 P. 20/28 06/09

FROM: IP12ZEYS/BRISBANE TO: 51 7 5494 9541 1998-09-16 12:30 #932 P.07/05
SEP. 14. 1998 5:09PM DVORAK & ORUM NO. 5123 P. 24/29

ECCLES, Anthony Phillips
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low copper alloy of the 479' patent, the germanium, as it is believed, would remain in solid solution during post melt hot processing, increasing the hardenability of the alloy over other fire scale resistant silver alloys. This new sterling or near sterling silver alloy became the preferred sterling silver alloy among Apecs customers. I applied for an Australian patent on my new silver alloy composition on November 15, 1993, and filed a PCT application for my composition on June 27, 1994.

COMMERCIAL SUCCESS

LICENSE AGREEMENT BETWEEN UNITED PRECIOUS METAL REFINING COMPANY INC. AND APECS INVESTMENT CASTINGS PTY. LTD.

The silver alloy composition of the claimed invention had the properties sought after by United Precious Metal and was capable of passing rigorous acceptance tests, including tests for appearance, fire stain resistance, work hardenability, and usefulness and suitability for jewelry manufacture.

United Precious Metal was delighted to be advised of the successful development of the present invention by Apecs Investment Castings, and was sufficiently confident in the Apecs silver alloy so that United Precious Metal entered into a License Agreement with Apecs Investment on July 1994. Royalties and a down payment were made for this particular patent application for the desirable silver alloy compositions of the claimed invention.

FROM: DVORAK & ORUM

LOCATION: 312 922 7747
LOCATION: 51 7 5494 9541

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Fax Number:

Company: SEP. 16. 1998, 4:24PM DVORAK & ORUM

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Type: 1998.09-16 12:31 #932 P.09/09 P. 21/28

FROM: PIZZEYS/BRISBANE
SEP. 14. 1998 3:09PM

TO: DVORAK & ORUM

61 7 5494 9841

1998.09-16

12:31
NO. 5123

#932 P.09/09
P. 25/29

PHILIP
ECCLES, Anthony Phillips
Serial No. 08/637,802
September 14, 1998
Page 5

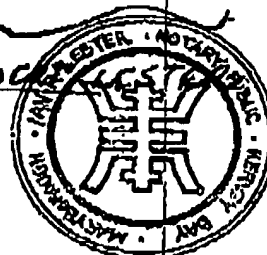
United Precious Metal has increased its sale of sterling silver alloys by at least 80% since 1995. The Apecs silver alloy compositions account for 62% of the sterling silver alloys sold by United Precious Metal so far in 1998. This percentage is up from 36% of the total sterling silver alloys sold by United Precious Metal in 1995, the first full year under the license agreement. United Precious Metal has provided a letter to Apecs dated August 10, 1998, stating that "the introduction of Apecs' developed formula increased the hardness of the silver product and became the preferred metal of choice of United Precious Metal customers." A copy of the above referenced letter is attached.

In my opinion, the commercial success as demonstrated by the license of the technology of the present invention to a significant manufacture of fine scale resistant silver alloys for the jewelry industry, along with the significant increase in sales of their silver alloys made according to the Apecs compositions, is evidence that the combination of elements in the silver alloy compositions of the present invention are novel and non-obvious.

Anthony Phillip Eccles
PHILIP

On this 16th day of September 1998, before me personally appeared Anthony Phillip Eccles, to me known and known to me to be the individual described in and who executed the foregoing instrument, and who thereupon acknowledged to me that he executed the same for the purposes therein set forth.

Name of Notary



LOCATION: 312 922 7747
LOCATION: 61 7 5494 9841

RX TIME 16.09.98 14:57

Date: 9/16/98

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Fax Number:

Company: SEP. 16. 1998 4:25PM - DVORAK & ORUM

Time: 5:15 PM

Sender: 312 922 7747

Subject:

Type: Fax #NO. 518541 P. 22/28. 04



UNITED[®]

PRECIOUS METAL REFINING, INC.

August 10, 1998

To: Apecs Investment Casting Pty Ltd.

Re: Sterling Silver

Dear Tony:

In regards to your request for additional information regarding the Brite Silver, I have the following.

United Precious Metal Refining, Inc. was incorporated in 1988. At the time of incorporation United Precious Metal Refining, Inc. had a specialty in the development and manufacture of master alloys for karated gold. This expertise was extended to the development of silver master alloys for which United Precious Metal Refining, Inc. was granted 2 U.S. patents, #4,973,446 and #5,039,479. These patents advanced the productivity of sterling silver manufactures and gained commercial acceptance. The main drawback was relative softness. The introduction of Apecs developed formula increased the hardness of the silver product and became the preferred metal of choice of United Precious Metal Refining's customers.

The unit sales volume's are as follows:

	Apecs	Total United Silver	Percentage Apecs
1995	160,043 T/oz.	447,470 T/oz.	35.7 %
1996	242,250 T/oz.	632,359 T/oz.	38.3 %
1997	423,442 T/oz.	816,759 T/oz.	51.8 %
1998	495,837 T/oz.	800,141 T/oz.	61.9 %

As you can see the percentage has grown every year as the Apecs formula has been offered, compared to the United products.

2781 TOWNLINE ROAD • ALDEN, NY 14004 • PHONE (716) 683-8334
(800) 999-FINE • FAX (800) 533-6657 • INT'L FAX (716) 683-5433

come visit us on the web: www.unitedpmr.com
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Company: SEP. 16. 1998 4:25PM DVORAK & ORUM

Time: 5:15 PM

Sender: 312 922 7747

Subject:

Type: 1998.09-16 12:27 0922 P. 25/28 08/09

SEP. 16. 1998 01:00PM DVORAK & ORUM

HQ 5123 F. 25/29

Agency's Docket No.: C-35469

Applicant or Patentee: Anthony Phillip Roales

Serial or Patent No.: 08/637,802

For: Silver Alloy Composition

Filed or Issued: 6-27-94

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS (37 CFR 1.9(c) AND 1.27(b)) - INDEPENDENT INVENTOR

As a below named inventor, I hereby declare that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, to the Patent and Trademark Office with regard to the

invention entitled Silver Alloy Composition

described in

- ☐ the specification filed herewith
☒ application serial no. 08/637,802 filed June 22, 1994
☐ patent no. _____ issued _____

I have not assigned, granted, conveyed, or licensed and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who could not be classified as an independent inventor under 37 CFR 1.9(c) if that person had made the invention, or to any person which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☐ no such person, concern, or organization
☒ person, concern, or organizations listed below:

* NOTE: Separate verified statements are required from each named person, concern, or organization having rights in the invention owing to their or

Full Name: United Precious Metal Refining, Inc.

Address: 2781 Townline Road, Alden, NY, 14004

☐ INDIVIDUAL ☒ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

Full Name: _____

Address: _____

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

Full Name: _____

Address: _____

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

Page 1 of 3

over →

LOCATION: 312 922 7747

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Type: 312 922 7747 Fax NO. 5185 P. 26/28 1998, 09-16 12:23 1998, 09-16

FROM: PIZZARIS/BRISBANE TO: DVORAK & ORUM 51 7 5494 9641 1998, 09-16 12:23 1998, 09-16 NO. 5123 P. 27/29

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee of any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.22(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Anthony Phillip Eccles

Name of Inventor

Name of Inventor

Name of Inventor

Signature of Inventor

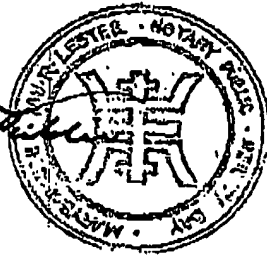
Signature of Inventor

Signature of Inventor

Date

Date

Date



WITNESS

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BY TIME 16.09.98 14:57
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Company: SEP. 16. 1998 04:26PMX 716 DVORAK & ORUM

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TO:

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#933 P.02/03

SEP. 14. 1998 6:01PM

DVORAK & ORUM

NO. 5123 P. 28/29

Attorney's Docket No.: C-35469

Applicant or Patentee: Anthony Phillip Eccles

Serial or Patent No.: 08/637,802

Filed or Issued: June 27, 1994

For: Silver Alloy Composition

VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY STATUS
 (37 CFR 1.9(f) AND 1.27(b))
SMALL BUSINESS CONCERN or NOT FOR PROFIT ORGANIZATION

I hereby declare that I am

☐ the owner of the small business concern identified below;☒ an official of the small business concern empowered to act on behalf of the concern below:

Name of Concern: United Precious Metal Refining, Inc.

Address of Concern: 2781 Townline Road, Alden, NY, 14004

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons, or the organization is a nonprofit organization under 37 CFR 1.9(e). For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled

Silver Alloy Composition

by inventor(s) Anthony Phillip Eccles

described in

☐ the specification filed herewith☒ application serial no.: 08/637,802 filed June 27, 1994☐ new application filed under Attorney Docket No.☐ patent no. issued

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

NOTE:

Separate verified statements are required from each named party, concern, or organization having rights to the invention relating to their status as small entities. (37 CFR 1.27)

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UNITED PAR

Type:

Fax NO. 5185 — P. 28/28 003

FROM: PIZZEYS/BRISBANE TO: 7168335433

1998.09-15 12:42 #533 F.03/03
NO. 5123 P. 29/29

Full Name: UNITED PRECIOUS METAL REFINING INC.

Address: 2781 TOWNLINE RD. ALDEN N.Y. 14004

☐ INDIVIDUAL ☒ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

Full Name:

Address:

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

Full Name:

Address:

☐ INDIVIDUAL ☐ SMALL BUSINESS CONCERN ☐ NONPROFIT ORGANIZATION

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

Name of person signing X MELVIN BEANHARD

Title of person signing X VICE PRESIDENT

Address of person signing X 5565 HIDDEN PINES CT

Signature X [Signature]

Date X 9/16/98

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